

Cover Sheet

Responsible Agency: U.S. Department of Energy

Title: Final Environmental Assessment for the Utah Coal and Biomass Fueled Pilot Plant (DOE/EA-1870)

Location: Kanab, Utah

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Abstract:

The U.S. Department of Energy (DOE) prepared this Environmental Assessment (EA) to evaluate the potential impacts of providing financial assistance to Viresco Energy, LLC, (Viresco) for its construction and operation of a Coal and Biomass Fueled Pilot Plant, that would be located in Kanab, Utah. The plant would be located on land leased to Viresco by the Utah School and Institutional Trust Lands Administration. The Pilot Plant would occupy approximately 1.5 acres of a 10-acre site located approximately 2.5 miles south of the downtown area of Kanab, Utah.

The Fiscal Year 2010 Appropriations Act for Energy & Water Development and Related Agencies (Public Law 111-85) included a \$2,500,000 earmark sponsored by then Senator Bennett of Utah for the "Utah Coal and Biomass Fueled Pilot Plant." In accordance with the earmark, DOE would provide financial assistance to Viresco to support its design, construction, and testing of a pilot-scale steam hydrogasification facility. Under a cost-sharing agreement, DOE would provide \$2,404,000 (approximately 80 percent of the total cost of the research and development project) and Viresco would contribute the remaining \$601,000. The Pilot Plant would be constructed, owned, and operated by Viresco. Viresco is responsible for obtaining the permits and other authorizations needed for the project; DOE would have no regulatory authority over the project or its operation. Under the cooperative agreement, Viresco would operate the Pilot Plant and collect data for a series of test runs totaling 30 days of operation over a period of months; after DOE's financial assistance ends, Viresco plans to seek additional funding for continued operations.

The objective of Viresco's proposed project is to conduct a pilot-scale evaluation of the Steam Hydrogasification Reaction (SHR) process. The Pilot Plant would be a small-scale facility designed to evaluate the technical feasibility of using steam hydrogasification to convert coal and biomass (such as agricultural or wood processing waste) into synthesis gas (syngas), and ultimately into clean fuels such as substitute natural gas, sulfur-free Fischer-Tropsch diesel, jet fuel, dimethyl ether, and methane. The successful operation of this SHR gasification technology at a pilot scale would provide engineering information needed to develop a commercialization pathway for this process. This project supports DOE's goal of developing and using domestic coal and renewable resources in an efficient and environmentally acceptable manner. This technology uses an advanced gasification process and produces clean fuels. The addition of biomass to the coal feedstock also reduces net greenhouse gas (GHG) emissions.

The EA found that the most notable potential changes from Viresco's proposed project would occur in the following areas: land use, aesthetics, air quality, solid and hazardous wastes, utilities, and socioeconomics. No significant environmental effects were identified in analyzing these potential changes.

Public Participation:

DOE encourages public participation in the National Environmental Policy Act (NEPA) process. Based on early local interest in the project, the DOE's public involvement effort for the Utah Coal and Biomass Fueled Pilot

Plant EA was more extensive than usually undertaken for an EA. The effort included a public scoping meeting in Kanab, as well as outreach to federal, state, and local agencies; Native American tribes; and members of the public. DOE consulted with the U.S. Fish and Wildlife Service (USFWS), the Utah Department of Natural Resources (UDNR), Division of Wildlife Resources, and the State Historic Preservation Office (SHPO) for compliance with federal regulations, and also consulted with the Kaibab Band of Paiute Indians and the Hopi tribe.

The Draft EA was released for public review and comment in August, 2011; a public hearing was held in Kanab on August 30; and a tribal community meeting was held at the Kaibab Paiute Tribal Headquarters in Pipe Spring, Arizona, on August 31. The public was invited to provide oral, written, or e-mail comments on the Draft EA to DOE by the close of the comment period on September 16, 2011. Copies of the Draft EA were also distributed to cognizant federal, state and local agencies; Native American tribes; and organizations. All comments, including late comments received after the close of the comment period, were considered in preparing this Final EA for the proposed DOE action. The EA was revised where appropriate to address comments as well as incorporate data that became available after the Draft EA was issued. Additions and revisions to the text are presented in italics and underlined. Public comments received on the EA and DOE responses are provided in Appendix E. The EA is also available on the DOE website at: <http://www.netl.doe.gov/publications/others/nepa/ea.html>.